

## CLAIMS

What is claimed is:

1. A method of cloning a master system, the method comprising:  
enabling an image of the master system, that includes a non-writable file partition, to automatically self-create an overlay that receives writes directed to the file partition, where the non-writable file partition comprises an operating system.
2. A method according to claim 1, wherein the image comprises code to automatically create the overlay based on the absence of an overlay partition in the image.
3. A method according to claim 1, wherein the image is configured to perform the automatic self-creating when the image is booted.
4. A method according to claim 3, wherein the image comprises a flag that indicates that the overlay has not been created, and wherein the automatic self-creating occurs in response to recognition of the flag when the image is booted.
5. A method according to claim 1, wherein the operating system is an embedded operating system .
6. A method according to claim 5, wherein the embedded operating system is a Microsoft Windows embedded operating system.
7. A method according to claim 1, wherein the operating system comprises a file system module that makes the non-writable file partition available as a writable file system, and where the overlay and embedded write filter function together in the operating system as a layer between the file system module and one or more storage media that store the data of the non-writable file partition and the data of the overlay, whereby the combined data so stored is transparently made available through the file system module as the writable file system.
8. A method according to claim 7, wherein the image comprises a flag that indicates that the overlay has not been created, and wherein the automatic self-creating occurs in

response to recognition of the flag when the image is booted.

9. A method according to claim 7, wherein the file system module implements a standard file system type, and wherein the overlay has a nonstandard file system type.

10. A method according to claim 9, wherein the overlay's nonstandard file system type renders it unrecognizable by cloning tools that can recognize and clone the standard file system type.

11. A machine readable storage storing the image according to claim 1.

12. A method of cloning a master system configured with a non-writable volume or partition comprising an operating system, where the master system is configured to provide an overlay to store updates directed to the non-writable volume or partition, the method comprising:  
configuring a flag in the master system with a setting, where the configured flag is for indicating that the overlay is needed and has not been provided;  
after configuring the flag, creating a master image of the master system, where the master image includes the configured flag; and  
creating a clone of the master system on a storage of another system based on the master image.

13. A method according to claim 12, further comprising automatically providing the clone of the master system with an overlay based on the setting of the flag in the clone of the master system, where the overlay provides file-system level write functionality to the non-writable volume or partition of the clone system.

14. The storage according to claim 13, the storage storing the clone of the master system that was automatically provided with the overlay.

15. The storage according to claim 12, the storage storing the clone of the master system.

16. A method, comprising:

building an operating system install comprising operating system files on a target drive, where the operating system install is configured to have an overlay providing write capability to a non-writable partition; then

performing a first boot of the target drive;

disabling the overlay; and

configuring the operating system install to have both a resealed or logical first-boot state and to indicate that the overlay is needed and has not been initialized.

17. A method according to claim 16, further comprising creating a condensed image of the operating system using an imaging tool, where the condensed image is capable of being installed on disk drives with different sizes or configurations.

18. A storage storing a condensed system image comprising an operating system, where the condensed system image is capable of being exploded to install the operating system on disk drives with different sizes or configurations, and where the operating system is enabled to self-create an overlay partition and write filter when booted.

19. An apparatus for cloning a master system configured with a non-writable volume or partition comprising an operating system, where the master system is configured to provide an overlay to store updates directed to the non-writable volume or partition, the apparatus comprising:

a flag in the master system configured with a setting, where the configured flag is for indicating that the overlay is needed and has not been provided;

a master image of the master system, created after the flag is configured, where the master image includes the configured flag; and

a clone of the master system created on a storage of another system based on the master image.